

KUSTOM[®]

OWNER'S MANUAL

DE200HD

200 Watt Bass Amplifier



Congratulations on the purchase of your new Kustom DEEP END bass amplifier. Your amp was designed to offer rock-solid tones, features that help you dial in a great sound and dependability that you can count on. Spend some time reading this manual so that you'll know all about your amp's many features. That way, you'll be best prepared for different playing environments. We wish you many years of musical enjoyment with your Kustom DEEP END amplifier. Be sure to turn it up and have fun!

ENGLISH

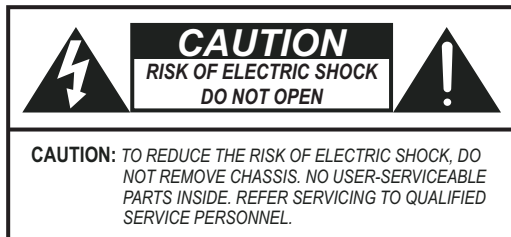
Danger

Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably to noise induced hearing loss but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time.

The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

DURATION PER DAY (HOURS)	8	6	4	3	2	1
SOUND LEVEL (dB)	90	93	95	97	100	103

According to OSHA, any exposure in the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canal or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss. If exposure in excess of the limits as put forth above, to insure against potentially harmful exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of inducing high sound pressure levels, such as this amplification system, be protected by hearing protectors while this unit is in operation.



AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF NON-INSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.




THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.



APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

IMPORTANT SAFETY INSTRUCTIONS

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be kept for future reference.
3. Read and understand all warnings listed on the operating instructions.
4. Follow all operating instructions to operate this product.
5. This product should not be used near water, i.e. Bathtub, sink, swimming pool, wet basement, etc.
6. Only use dry cloth to clean this product.
7. Do not block any ventilation openings, It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
8. Do not install this product near any heat sources ;such as, radiators, heat registers, stove or other apparatus (including heat producing amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord being walked on or pinched, particularly at Plugs, convenience receptacles and the point where they exit from the apparatus. Do not break the ground pin of the power supply cord.
11. Only use attachments specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving cart/ apparatus combination to avoid injury from tip-over. 
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation ports or any other openings.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way; such as, power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
16. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. The MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

FRENCH

Danger

L'exposition a des niveaux eleves de bruit peut provoquer une perte permanente de l'audition, Chaque organisme humain reagit differemment quant a la perte de l'audition, mais quasiment tout le monde subit une diminution de l'acuite auditive lors d'une exposition suffisamment longue au bruit intense. Les autorites competentes en reglementation de bruit ont defini les expositions tolerees aux niveaux de bruits:

DURE EN HEURES PAR JOUR	8	6	4	3	2	1
INIVEAU SONORE CONTINU EN dB	90	93	95	97	100	103

Selon les autorites, toute exposition dans les limites citees ci-dessus, peuvent provoquer certaines pertes d'audition. Des bouchons ou protections dans l'appareil auditif ou sur l'oreille doivent etre portes lors de l'utilisation de ce systeme d'amplification afin de prevenir le risque de perte permanente de l'audition, Dans le cas d'expositions superieures aux limites precitees il est recommande, afin de se premunir contre les expositions aux pressions acoustiques elevees potentiellement dangeereuses, aux personnes exposees aux equipements capables de delivrer de telles puissances, tels ce systeme d'amplification en fonctionnement, de proteger l'appareil auditif.



CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE DE VOLTAGE DANGEREUX NON-ISOLE A L'INTERIEUR DE CE PRODUIT QUI PEUT ETRE DE PUISSANCE SUFFISAMMENT IMPORTANTE POUR PROVOQUER UN CHOC ELECTRIQUE AUX PERSONNES.



CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE D'INSTRUCTIONS D'UTILISATION ET DE MAINTENANCE DANS LES DOCUMENTS FOURNIS AVEC CE PRODUIT.

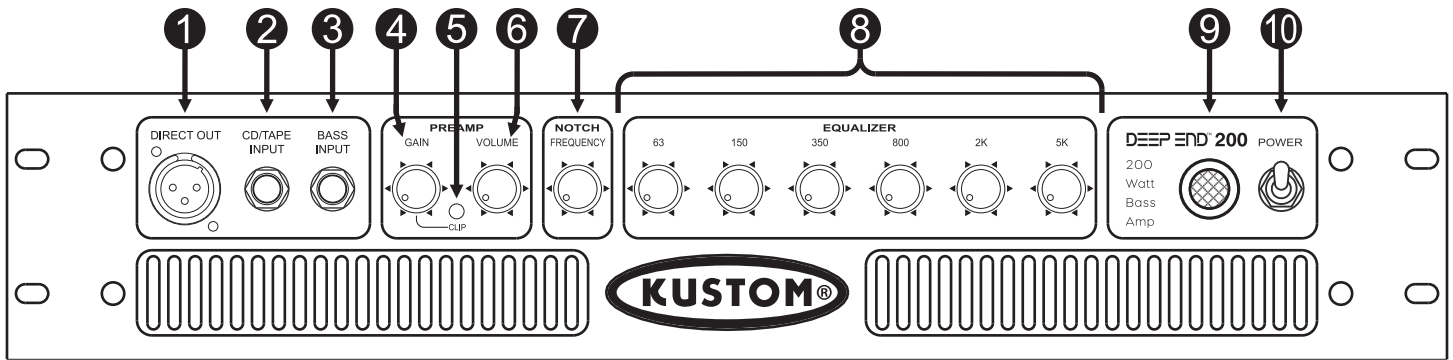


AFIN DE REDUIRE LES RISQUÉ D'INCENDIE ET DE DECHARGE ELECTRIQUE, NE PAS EXPOSER CET APPAREIL A LA PLUIE OU A L'HUMIDITE.

IMPORTANTES INSTRUCTIONS DE SECURITE

1. Lire avec attention toutes les recommandations et précautions d'emploi avant d'utiliser ce produit.
2. Toutes les recommandations et précautions d'emploi doivent être conservées afin de pouvoir s'y reporter si nécessaire.
3. Lire et comprendre tous les avertissements énumérés dans les précautions d'emploi.
4. Suivre toutes les précautions d'emploi pour utiliser ce produit.
5. Ce produit ne doit pas être utilisé près d'eau, comme par exemple baignoires, éviers, piscine, sous-sol humides ... Etc.
6. Utiliser exclusivement un chiffon sec pour nettoyer ce produit.
7. Ne bloquer aucune ouverture de ventilation. Ne pas placer le produit tout contre un mur ou dans une enceinte fermée, cela générerait le flux d'air nécessaire au refroidissement.
8. Ne pas placer le produit près de toute source de chaleur telle que radiateurs, arrivées d'air chaud, fourneaux ou autres appareils générant de la chaleur (incluant les amplificateurs producteurs de chaleur) .
9. Ne pas négliger la sécurité que procure un branchement polarisé ou avec raccordement à la terre, Un branchement polarisé comprend deux fiches dont l'une est plus large que l'autre. Un branchement à la terre comprend deux fiches plus une troisième reliée à la terre. Si la fiche secteur fournie ne s'insert pas dans votre prise de courant. consulter un 'électricien afin de remplacer votre prise obsolète.
10. Protéger le cordon d'alimentation de tout écrasement ou pincement, particulièrement au niveau des fiches, des réceptacles utilisés et à l'endroit de sortie de l'appareil. Ne pas casser la fiche de terre du cordon d'alimentation.
11. Utiliser uniquement les accessoires spécifiés par le constructeur.
12. Utiliser uniquement avec le chariot de transport, le support, le trépied, la console ou la table spécifiés par le constructeur ou vendus avec l'appareil. Lors de l'utilisation d'un chariot, bouger avec précaution l'ensemble chariotlappareil afin d'éviter les dommages d'un renversement.
13. Débrancher cet appareil lors d'orages ou s'il n'est pas utilisé pendant une longue période.
14. Des précautions doivent être prises afin qu'aucun objet ne tombe et qu'aucun liquide ne se répande à l'intérieur de l'appareil par les orifics de ventilation ou n'importe quelle autre ouverture.
15. Pour toutes interventions techniques s'adresser à un technicien qualifié. L'intervention technique est nécessaire lorsque l'appareil a été endommagé de n'importe quelle façon, comme par exemple si le cordon secteur ou sa fiche sont détériorés, si du liquide a coulé ou si des objets sont tombés à l'intérieur de l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, s'il ne fonctionne pas normalement ou s'il est tombé.
16. ATTENTION: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité.
17. La prise Mains, au coupler, est utilisé pour la source d'alimentation électrique. Il est conseillé de garder cette prise facilement accessible.





Direct Output (1)

This XLR jack is used to connect the amplifier to a mixer or other line level amplifier. The output for this jack is post EQ, so the EQ setting will be reflected on this output.

CD/Tape Input (2)

This stereo 1/4" jack will allow you to plug in a CD player or other line level source into the amplifier. This can be used to practice with the music. The left and right signals are combined into a mono signal. Note: To adjust the volume of the source, adjust the output volume of the device.

Bass Input (3)

This 1/4" jack is used to connect your bass guitar to the amplifier. It is intended for bass, but will accept other high-impedance instruments as well.

Gain Control (4)

This control is used to match the output level of your bass to the input of this amplifier. If the Clip LED (5) lights, turn the control counter clockwise until the LED turns off. Then adjust the Volume Control (6) to desired overall volume.

Clip Indicator (5)

This LED indicates if the input is too "hot" for the amplifier. If this lights, turn the Gain Control (4) counter clockwise until the LED turns off. Then adjust the Volume Control (6) to desired volume.

Volume Control (6)

This control adjusts the overall volume of the amplifier. The Gain Control (4) works in conjunction with this knob.

Notch Frequency Control (7)

This control is a wide band sweep that ranges from 40 to 800 Hz. It is set to -12db and used to help you fine tune your sound. It is effective for removing unwanted overtones.

Equalizer Section (8)

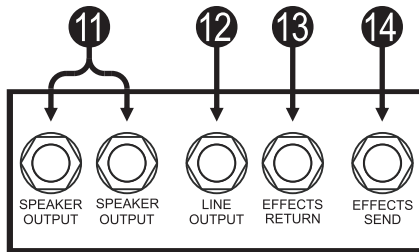
This is an active equalizer used to adjust your overall tone to a desired setting. Turning them fully counterclockwise will cut that frequency by -12db. Turning them fully clockwise will boost that frequency by +12db. The center frequencies are labeled above the knobs. Note: The 5K control essentially works as a horn volume control.

Power Indicator (9)

This indicator will light when the AC power is applied to the amplifier.

Power Switch (10)

This switch is used to apply AC power to the amplifier.



Back Panel:

Speaker Output Jacks (11)

These 1/4" jacks are used to connect speaker cabinets to the amplifier. Note: The minimum load for this amplifier is 4 ohms.

Line Output Jack (12)

This 1/4" jack is used to connect the amplifier to another line level piece of equipment, such as a mixer. The output from this jack is after the preamp, so all of the controls on the amplifier will affect the sound from this jack.

Effects Return Jack (13)

This 1/4" jack is used to connect an external effects processor to the amplifier. The output of the effects processor should be connected to this jack. Note: This jack can also be used as a power amp in jack.

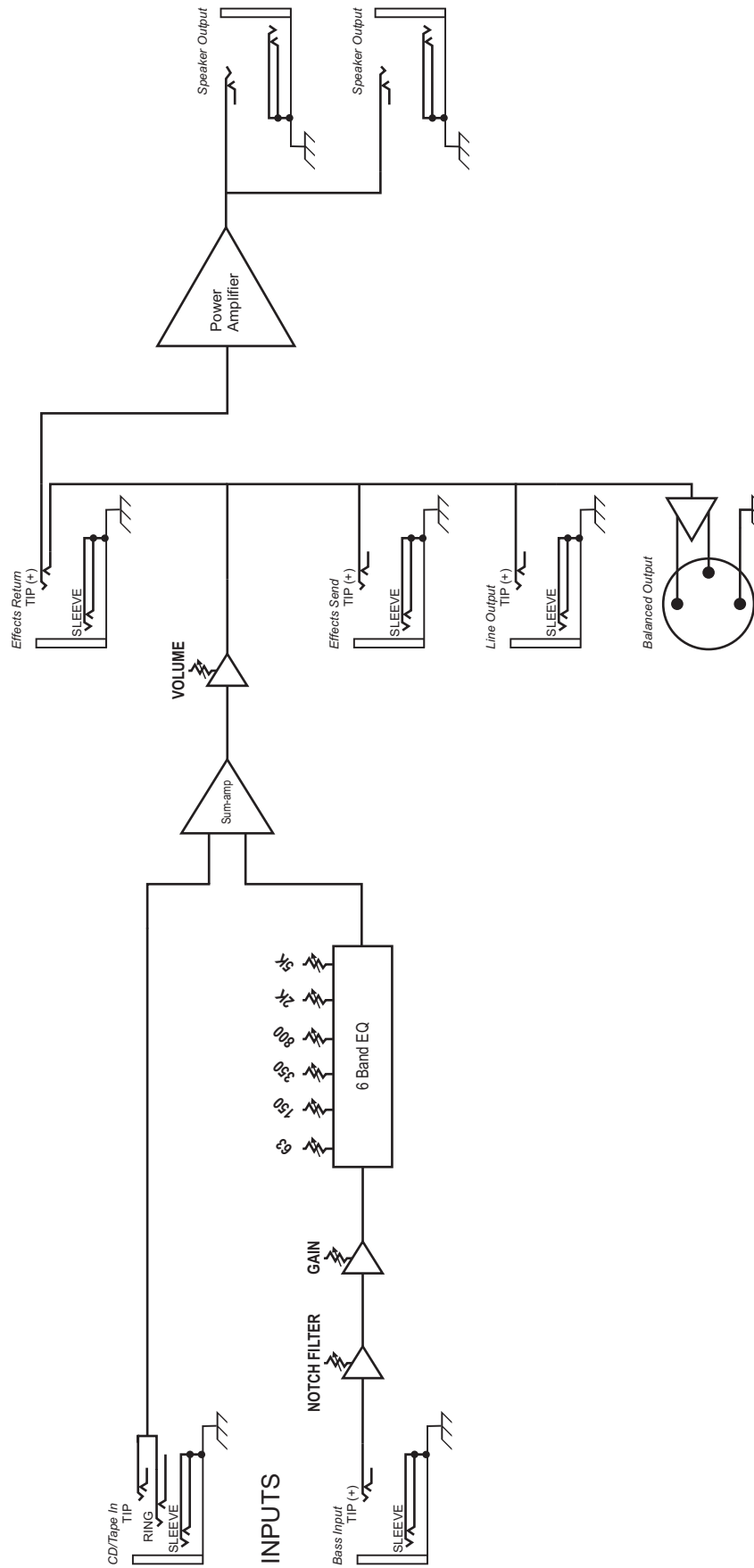
Effects Send Jack (14)

This 1/4" jack is used to connect an external effects processor to the amplifier. This jack should be connected to the input of the effects processor. Note: This jack can also be used as a preamp out jack.

Specifications

Model	DE200HD	Bass Amplifier
Output Power	200W	4 ohm @ 5% THD
	120W	8 ohm @ 5% THD
Frequency Response	20Hz - 19 kHz	Actual response is tailored to speaker cabinet for accurate acoustical response.
Total Harmonic Distortion	Less than 0.4%	Measured at 1VRMS (0dBv) at direct output, effects send, or line output
Hum & Noise	-60dB	Residual Noise, all level controls 0% (minimum)
	-50dB	Nominal System Noise, all level controls at 50%
System Gain	All measurements made at 1kHz	
	40dB	CD/Tape Input to Power Amp Out
	60dB	Bass Input to Power Amp Out
	-5dB	CD/Tape Input to Line Output
	40dB	Bass Input to Line Output
	-5dB	CD/Tape Input to Direct Output
Equalization	63 to 5kHz, 6 Band Graphic, all ±12dB	
	40dB	Bass Input to Direct Output
Power Requirements	USA/Canada	120VAC/60Hz, 300W nominal
	Europe	230VAC/50Hz, 300W nominal
	UK	230VAC/50Hz, 300W nominal
	Australia	240VAC/50Hz, 300W nominal
	Japan	100VAC/50-60Hz, 300W nominal
Dimensions	mm	89 (Height) x 482 (Width) x 245 (Depth)
	inches	3 1/2 (Height) x 19 (Width) x 9 3/5 (Depth)
Weight	kg/lbs	7 kg / 15 lbs

DE200HD Block Diagram



EC Declaration of Conformity

We: Kustom Musical Amplification Inc.
PO. Box 568
Hebron, Ky 41048-0568
Tel: 1-513-451-5000 Fax: 1-513-347-2192

Declare that the product

Product name: Kustom

Product model number: DE200HD

to which this declaration relates is in conformity with the following standards;

EN55013 (A12) : 1995	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment.
EN55020: 1995	Electromagnetic immunity of broadcast receivers and associated equipment.
EN61000-3-2: 1995	Limits for harmonic current emissions (equipment input current \leq 16A per phase).
EN61000-3-3: 1995	Limitation of voltage fluctuations and flicker in low voltage supply systems for equipment with rated currents \leq 16A.
EN55103-1: 1995	Electromagnetic Compatibility - Product family standard for Audio, Video Audio-visual and entertainment Lighting Control Apparatus.
EN60065: 1994	Safety requirements for main operated electronic and related apparatus for household and similar general use.

Following the provisions of EU Council Directive(s): 72/73 EEC and 89/336/EEC.

We the undersigned, hereby declare that the equipment specified above conforms to the aforementioned directive(s).

Name of authorized person: James Brown, Chief Engineer

Signature:  Date: 26 Oct 2006

Kustom Amplification Inc.
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